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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,221	10/28/2003	James R. Lundberg	CNTR.2115	4935

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EXAMINER

NGUYEN, HAI L

ART UNIT	PAPER NUMBER
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2816

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/27/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/27/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/695,221

Applicant(s)

LUNDBERG, JAMES R.

Examiner

Hai L. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,10-13 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 3,8,9 and 14-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/28/2003 & 02/16/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 4, the term "relatively weak devices" is a relative term, which renders the claim indefinite. The term "relatively weak devices" is indefinite for the same reason "relatively shallow" was held to be indefinite by the Board of Appeals, i.e., it is not clear what applicant intends to cover by the term "relatively weak devices" when referring to the third and fourth N-channel devices. See *Ex parte Oetiker*, 23 USPQ2d 641 (Bd. Pat. App & Inter. 1992). MPEP § 2173.05(b).

Claim 6 is indefinite because of the limitation "sufficiently large", which is a relative term; note the above discussion with regard to claim 4.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 10-12 and 19-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Fischer et al. (US 6,459,306).

With regard to claim 1, Fischer et al. discloses in Fig. 1 a receiver comprising first and second input AC-coupled capacitors (104, 106); a first voltage divider coupled between DC source voltages and having a first junction coupled to said first input AC-coupled capacitor; a second voltage divider coupled between DC source voltages and having a second junction coupled to said second AC-coupled capacitor; and a differential amplifier (102), having a differential input including a first input coupled to said first junction and a second input coupled to said second junction, and having an output. Furthermore, the limitation that “said output of said differential amplifier provides an output clock signal that is aligned with an input clock signal provided through at least one of said first and second input AC-coupled capacitors” is also met by the prior art. If the claimed structure is anticipated by the prior art, any recited results or corresponding functions are also met.

With regard to claim 10, Fischer et al. discloses in Fig. 1 an integrated circuit comprising first and second input pins (IN, IP); a first capacitor (104); a second capacitor (104); a first voltage divider coupled between DC sources and having a first junction coupled to said second end of said first capacitor; a second voltage divider coupled between DC sources and having a second junction coupled to said second end of said second capacitor; and a differential amplifier (102), having a differential input including a first input coupled to said first junction and a second input coupled to said second junction. Furthermore, the limitation that “an output that provides an output clock signal that is aligned with an input clock signal provided to at least one

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of said first and second input pins” is also met by the prior art. Note the above discussion with regard to claim 1.

Claim 11 is also met by the prior art, given that the reference shows the precise structure claimed by the present invention and that claim 11 adds nothing to the claimed structure of the circuit. The phenomena, how it is use, is an intended use of the structure and does not carry patentable weight. Therefore, as the claimed structure is met by the prior art, the intended use of the circuit is likewise met. Recall that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987.)

Claim 12 is similarly rejected; note the above discussion with regard to claim 11.

Claims 19-22 are similarly rejected; note the above discussion with regard to claims 10 and 11. Since the additional limitation such as “a printed circuit board and a clock generator providing a bus clock signal” is an intended use of the structure and does not carry patentable weight.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al. in view of Stockstad et al. (US 6,703,894).

With regard to claim 2, the above-discussed circuit of the prior art meets all of the claimed limitations except that the capacitors are not configured with the transistors as recited in the claim. Stockstad et al. teaches in Fig. 4A a circuit having transistor configured as a capacitor, which is relatively smaller size than a regular capacitor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to replace the capacitors in Fig. 1 of the prior art with the capacitors are constituted by the transistors for the advantage of conserving space of the integrated circuit.

Claim 13 is similarly rejected; note the above discussion with regard to claim 11.

7. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer et al. in view of Krzentz (US 5,796,296).

With regard to claim 5, the above-discussed circuit of the prior art meets all of the claimed limitations except that the voltage dividers are not configured with the transistors as recited in the claim. Krzentz teaches in Figs. 3-5 a circuit having transistor configured as a voltage divider, which is relatively smaller size than a voltage divider is constructed of resistors. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to replace the voltage dividers in Fig. 1 of the prior art with the voltage dividers are constituted by the transistors for the advantage of conserving space of the integrated circuit.

With regard to claim 7, the references also meet the recited limitations in the claim.

Allowable Subject Matter

8. Claims 3, 8, 9 and 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose or fairly suggest a multiple mode clock receiver (400 in instant Fig. 4), as recited in claims 3 and 14, having a very specific structural limitation such as a third N-channel device (N3) having a source coupled to the source of the first N-channel device (N1) and a drain and a gate coupled to the first junction (BASS); and a fourth N-channel device (N4) having a source coupled to the source of the second N-channel device (N2) and a drain and a gate coupled to the second junction (PIKE); and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

The prior art of record fails to disclose or fairly suggest a multiple mode clock receiver (400 in instant Fig. 4), as recited in claim 8, having a very specific structural limitation such as a differential amplifier (405) comprises a fifth P-channel device (P5) having a source and a substrate coupled to a voltage source, a gate coupled to a center node (CNT) and a drain; a sixth P-channel device (P6) having a source and a substrate coupled to said voltage source, and a gate and drain coupled together at said center node; a third N-channel device (N5) having a source, a gate coupled to said first junction, and a drain coupled to said drain of said fifth P-channel device; a fourth N-channel device (N6) having a drain coupled to said source of said third N-channel device, a gate coupled to said center node, and a source coupled to ground; a fifth N-channel device (N7) having a source coupled to said source of said third N-channel device, a gate coupled to said second junction, and a drain coupled to said drain of said sixth P-channel

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device; and a sixth N-channel device (N8) having a drain coupled to said source of said fifth N-channel device, a gate coupled to said center node, and a source coupled to ground; and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wong et al. (US 6,407,591) is cited as of interest because it discloses a Self-configurable clock input buffer compatible with high-voltage single-ended and low-voltage differential clock signals.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747 and Right Fax number is 571-273-1747. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HLN

March 14, 2007



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